

COBB COUNTY FIRE MARSHAL'S OFFICE

NFPA 13/13R (2002 ed.) NEW SYSTEM – PLAN REVIEW CHECKLIST

Job Type

☐ Shell

☐ Addition

Date _____

☐ New Building

☐ Retrofit

Reviewer _____

Building Permit

☐ Cobb County

☐ Acworth

☐ Kennesaw

☐ Powder Springs

Job Name _____

Address _____ Suite # _____

City _____ Zip _____

Complex Name _____

 Was Flex Pipe Used: ☐ Yes ☐ No

 Code Applied: ☐ 13 ☐ 13R Number of Buildings _____ Units _____

Sprinkler Company _____ Phone # _____

State # _____ Cobb County Cert # _____ Expires: _____

***NOTE* Designer must fill out form completely before plans will be reviewed!!!**

OK

Absent

1) CD with Plans, Calculations, and all Submittal data in PDF format

2) An approved site utility plan by Cobb County Fire Marshal's Office per set of plans {check for revisions and FIRE LINE APPROVED stamped on plan}

3) FDC, PIV, and system riser locations match approved utility plan

4) Location map with one cross street minimum. Provide an accurate north arrow.

 5) Show the point of test location on the plans. Static, residual and flow location must be shown on plans and calculated back to that point. **Flow test info must be less than 6 months old**

6) Required water information: Location, elevation, results, date, time, conducted by. (All systems must provide a 24-hour pressure test and use the lowest pressure over 30 min.)

7) Backflow make, model, size and elevation on the plans (provide Cut Sheet with Loss Chart)

8) Square Footage per permitted area and per system called out. Also, have the correct permitted name and address on the plans.

9) All spaces of the structure labeled per use

10) Show, make, model, size, K-factor, temp, style and quantity for all sprinkler heads {Include cut sheet for each head}

11) Show the make, model and size of all applicable material and equipment used in the sprinkler system on the plans. {Submit cut sheets on all sprinkler heads and pump data booklets. Pump room details must be on the plans. Also, meet all requirements of NFPA 20 and NFPA 13}.

12) Type of system and type of hazard each system is designed for on the plans

13) Inspectors test and auxiliary drains locations

14) Show all hangers and spacing

15) Show a detail of each type of hangers used

16) Show accurate freeze protection details

17) Breezeway Crossings will require a P.E. stamp with a date on it per job. {Include UL design number when penetrating a rated wall and address the freezing issue}.

18) In residential occupancies only, identify all bathrooms under 55 sq. ft. and call out actual sq. ft. per bathroom

 19) **Show all sprinkler head coverage dimensions.** Also show square footage of all rooms when using the small room rule, identify all areas with a symbol, S.R.R. is an example. {Small room rule to be used only in light hazard occupancies}

 20) **Racks:** show rack cross sections and commodity class per NFPA 13 on your plans

All buildings with racks must fill out an Owner's Information Certificate {N.F.P.A. 13 Figure A.14.1 (b)}

 21) **Commodity Protection Assessment** required for all Storage Occupancies before 80 %. (note on plan)

22) Show all sprinkler pipe sizes

23) Show all elevation changes of pipe on the plans (include all riser nipples)

NOTE Designer must fill out form completely before plans will be reviewed!!!	OK	Absent
24) An accurate riser detail {Identify Each System}		
25) Key plan or Zone Map to show the area of the building illustrated on the page		
26) Note the construction type per the architectural drawings and show a cross-section to identify the roof construction, floor construction, canopies & unique areas		
27) All attic systems must show all construction materials used		
28) Call out the design criteria for each hazard and indicated how and where each was derived.		
29) Address all elevator rooms or shafts per NFPA 13 (Sprinklers are required at the top and bottom of the shaft. Exception must be called out on the plans).		
30) Address all standpipes per International Fire Code and NFPA 14 (complete Standpipe checklist)		
31) Penetration through any rated wall or floor needs to be shown on the plans. Provide a detail and approved lab design number {Must have general note if not applicable}		
32) Show size and locations of all hanging heaters and use intermediate heads accordingly {Must have general note if not applicable}.		
33) Show all roll back doors and overhead doors {Must have general note if not applicable}.		
34) Show all skylights, domes and unusual ceilings, include all ceiling slopes {Must have general note if not applicable}.		
35) Show all canopies, docks and obstructions. {Must have general note if not applicable}.		
36) Identify all HVAC ducts and obstructions over 4 ft. {Must have general note if not applicable}.		
37) Show hydraulic calculation information on the plans for each remote area		
38) Finish floor elevations of all buildings		
39) Show all hydraulic reference nodes. {Avoid duplicate nodes}		
40) Dry Systems – Increase all remote areas by 30%. Increase remote area an additional 30% if slope of ceiling is greater than 2 in 12. Show sloping direction of all sprinkler pipes in the dry system. Slope must meet minimum requirements of NFPA 13.		
41) Slope of ceiling {If greater than 2 and 12 and is non-storage, your remote area must increase by 30%, need cross section to verify}.		
42) A note reflecting maximum sprinkler head spacing for each hazard shown on the plans.		
43) C of C, N.I.C.E.T. or P.E. stamp on the plans (Original signature required on one set at a minimum)		
44) Show floor area size of each system . Also show volume of all dry systems {C-factor must be 100 for all dry systems unless using galvanized pipe in your system}.		
45) Remote area is correctly and accurately outlined. {If reduced show a cross section and elevations. Example, if the remote area is not exactly 1500 sq. ft. show the actual size on the plans}.		
46) Correct hydraulic calculations with a 10 psi safety margin and cover sheet that clearly identifies each area calculated.		
47) All combustible concealed spaces must be indicated and addressed per NFPA 13. Stages made of anything other than non-combustible material, Fire Resistant Wood or other approved methods will need to be protected per NFPA 13.		
48) Three stapled sets of plans and completion of this form with all attachments		
49) Name of the person responsible for the design of the sprinkler plans		
50) Submit one set of plans per permit number unless permits are adjacent and encompass the same system. Provide a Plan Review Checklist for each permitted area.		

The above is not an all-inclusive list - Plans must meet all NFPA requirements. Please refer to chapter 120-3-3 Rules and Regulations of the Safety Fire Commissioner regarding what edition of specific codes Cobb County is using. An explanation of all requirements is available upon request.

Provide contact information for person responsible for completing the sprinkler plan review form below:

Name: _____ Phone number: _____ Date: _____

COBB COUNTY FIRE MARSHAL'S OFFICE
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Explanation of requirements:

- 1) All permitted buildings being built in Cobb have to come through the Fire Marshals Office for a civil utility plan review. After all requirements are met. The Fire Marshal's Office will stamp the civil utility plans with a "FIRE LINE APPROVED" or "REVISION" stamp. That page needs to be attached to each copy of sprinkler plans requesting a plan review.
- 2) All sprinkler plans must have the Cobb County Water Department stamp of approval, before plans will be reviewed. (Cobb County Water Department is located at 680 South Cobb Drive, Marietta, Georgia 30060-3111 Phone # 770-423-1000 or Marvin Richards Phone # 770-419-6424)
- 3) The FDC and PIV locations need to match the approved civil plan. The system riser and alarm bell locations also need to be clearly identified on plans.
- 4) The location map is used to find the job site. Please show at least one cross street to help identify the location of site. (Two street names equals a cross street)
- 5) Show the location of the flow test on your plans. Identify the location that static, residual and flow pressures were acquired. (**NOTE:** all sprinkler systems must be calculated back to the point of test not the connection tap to the city main)
- 6) Minimum water information required on the sprinkler plans: The location of the flow test. The elevation of the flow test compared to all applicable buildings being hydraulically calculated. The flow test results. The date and time the flow test was conducted and who performed the flow test. **All systems must provide a 24-hour pressure test and use the lowest pressure for 30 minutes on all hydraulic calculations. Flow tests are allowed to be done by sprinkler contractors. All flow tests must follow AWWA standards and meet all NFPA 13 requirements. 24-hour pressure tests shall not be preformed on Friday; this is due to no out door watering allowed on Fridays. Call Cobb County water department for procedures and steps to performing flow tests.**
- 7) The make, model and size of all backflow equipment along with the elevation is information that will be needed to hydraulically calculate the sprinkler system accurately. Show that information on your plans.
- 8) Square footage and addresses have to match what the permit reads. **This is important.** Confirm the job name, address and square footage as it appears on the submitted plans. Show the exact size of each sprinkler system also.
- 9) Label all spaces in the building. Identify what the intended use for each room and area will be.
- 10) For all sprinkler heads show, make, model, size, K-factor, temp, quantity.
- 11) All equipment in the sprinkler system needs to be identified. Please label all equipment size, make and model. Submit cut sheets on all sprinkler heads and pump data booklets. Pump room details must be on the plans, please show column lines to help illustrate and locate your detail. Meet all requirements of NFPA 20 and NFPA 13.
- 12) Indicate each type of system and identify the hazard classification and the density it is designed to.
- 13) Show locations of all inspector tests and auxiliary drains.
- 14) Hanger spacing needs to be shown on the plans. In simple non-compliance instances a general note will be accepted.
- 15) Show a detail of all different types of hangers used on the job.
- 16) Show an accurate detail illustrating how you protect your pipe from freezing.
- 17) A breezeway crossing detail with a Professional Engineer's stamp on it. This detail needs to address the penetration through the rated wall and show the UL listing number. The freeze protection also needs to be illustrated. This detail needs to be dated and specific to the submitted job.
- 18) Bathrooms under 55 sq. ft. that have sprinkler heads removed will be measured to confirm. Please indicate the square footage you measured on all bathrooms with the head removed. All other exceptions must be met in NFPA 13, to allow the head to be removed.

- 19) Show all appropriate sprinkler head coverage dimensions. When using the small room rule from NFPA 13, call out the room total square footage. (Small room rule to be used only in light hazard occupancies).
- 20) **Racks:** Show a cross section and call out the commodity classification per NFPA 13 on the submitted plans.
- 21) All buildings with racking will need an Owner's Information Certificate filled out completely. (See NFPA 13 Figure A 14.1 (b)) This will be used to determine the density requirements for that specific protection area. This is information that the sprinkler contractor will need for his design of the system and should already have.
- 22) Show all pipe sizes so hydraulic calculations can be checked and verified.
- 23) Clearly show all elevation changes of pipe on the sprinkler plans.
- 24) Clearly show an accurate riser detail for each system. If not easily locatable on the plans, please show a column line to show intersection.
- 25) If your sprinkler plan cannot fit all on one page, provide a key plan. The Key plan or Zone Map is used to show the area of the building illustrated on the page.
- 26) All attic systems must have an accurate cross section showing all construction materials.
- 27) Note on the sprinkler plans the type of construction per the architectural drawings. Include a cross section that shows all material of construction. I am specifically looking for the construction of the roof, walls and between the floors, canopies and unique. An accurate cross section of this is commonly located in the building plans. Multiple views may be required to illustrate all areas.
- 28) For different occupancy areas indicate with a note how and where in the code you came up with the design area.
- 29) Address all elevator shafts per NFPA 13 installation requirements 8.14.5. To remove either of the required sprinkler heads call out the exception requirement on the plans.
- 30) Address all standpipes per the International Fire Code and NFPA 14.
- 31) A penetration through any listed wall or floor needs to show an approved lab design listing and an accurate detail. It needs to be shown on the plans. A general note will suffice if not applicable.
- 32) Show all hanging heaters and use intermediate heads accordingly. If the heaters will not obstruct any part of the system, a general note will suffice.
- 33) Show rollback doors and overhead doors. If they will not obstruct any part of the system, a general note will suffice.
- 34) Show all skylights, domes and unusual ceilings, include all ceiling slopes. If they will not affect any part of the system, a general note will suffice. Unusual ceilings will need to be illustrated with a cross section.
- 35) Show all canopies, docks and obstructions. If they will not obstruct any part of the system, a general note will suffice.
- 36) Identify all HVAC ducts over 4 ft. A general note will suffice if not applicable
- 37) Show all applicable hydraulic calculation information on the plans. Calculation boxes, or gallons per minute to calculate each sprinkler head for residential designs.
- 38) Finish floor elevations for each building requesting a review will be required. Please show this information on your plans.
- 39) Clearly show all hydraulic reference nodes on the plans. Please avoid using duplicate nodes. Different node tags for each different system are to be used.
- 40) Dry systems remote area must be increased by 30% per NFPA 13. In addition if the slope of the ceiling is greater than 2 and 12 the remote area will need to be increased again. Example, 1500 sq. ft. x 30% (1500 sq. ft. x 30% = 1950 sq. ft.) if you increase the remote area again, you must increase the 1950 sq. ft. by 30% (1950 sq. ft. x 30% = 2535 sq. ft.) not 1500 sq. ft. x 60% (1500 sq. ft. x 60% = 2400 sq. ft.) Also show the direction of slope for all sprinkler pipe in the dry system. Slope must me minimum requirements of NFPA 13.
- 41) If the slope of the ceiling is greater than 2 and 12 (16.7%) you must increase your design area by 30% to accommodate in non-storage areas. See NFPA 13, 2002 edition (11.2.3.2.4 - Sloped Ceilings in Non-Storage Applications)
- 42) A note reflecting maximum sprinkler heads coverage for each different occupancy area and each different head. Example: "100 sq. ft. maximum spacing for extra hazard occupancy"

- 43) The certificate of competency stamp needs to be on all sprinkler plans. In addition to the sprinkler plans, if you have other stamps such as a professional engineer stamp or a NICET IV stamps you will display them on the cover sheet or each page whatever you prefer.
- 44) Identify each sprinkler systems area of operation. Clearly show on the plans in square footage the floor area that each system is responsible for (**even if you only have one system**). Each dry sprinkler system in addition must show their volume in gallons of each system. Also, the C-factor in your hydraulics must be 100 for all dry systems unless using galvanized pipe in your calculations.
- 45) Clearly identify the remote area selected. Indicate the area in sq. ft. If reduced show accurate cross section showing the appropriate ceiling heights and elevations. When sizing your remote area the formula to use is as follows: The square root of 1500×1.2 divided by the distance between the sprinkler heads equals the amount of sprinklers per line to be used. If the remote area is not exactly 1500 sq. ft. show the actual size on the plans.
- 46) All hydraulic calculations must be correct and have a 10 psi safety margin **not a 10% safety margin**. Also include a cover sheet for each calculation, with the appropriate information filled in. Clearly identify each remote area location. If you have more than 30 total pages of total submitted hydraulics, a PDF copy of the hydraulics will need to included with your submittal.
- 47) All stages must be constructed of non-combustible material, FR wood or have an approved method to fire rate it. If that cannot be accomplished, sprinklers must be put under the stage per NFPA 13 requirements.
- 48) Three full sets of stapled sprinkler plans plus hydraulic calculation, along with the sprinkler plan review form filled out completely, must be submitted for plan review. Attach all data booklet and loose material to the plans securely or you will run the risk of it being lost.
- 49) The name and phone number of the person who filled out this application for plan review needs to be filled in. This will speed up the plan review process by allowing the reviewer to ask any questions missing on the plans.
- 50) Submit one set of plans per permit number. **DO NOT** submit one set of plans with multiple permits in it. Provide a full submittal for each permitted area. Example: Each area should have all the required information for a full submittal on each set of plans. This means a lot of duplicate information will be on each set of the sprinkler plans.